

ABSTRACT OF THE DISCLOSURE

A magnetic core transceiver antenna for EAS marker detection is provided. The core includes a stack of amorphous alloy ribbons insulated from each other and laminated together. A coil winding of wire, also insulated from the ribbons, and connected to an electronic controller provides the transmitter and receiver modes. The transceiver antenna is optimized for the dual mode operation, and is smaller and uses less power than conventional air-core EAS antennas with equivalent performance. Complex core geometries, such as a sandwiched stack of different sized ribbons, can be implemented to vary the effective permeability of the core to customize antenna performance. Multiple transceiver antennas can be combined to increase the size of the generated EAS interrogation zone.

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